

CONTENTS OF VOLUME 30

- ADAMS, G. A.—The constitution of a polyuronide hemicellulose from wheat straw, 698.
See Colvin, J. R.
- ADAMS, G. A. and CASTAGNE, A. E.—Purification and composition of a polyuronide hemicellulose isolated from wheat straw, 515.
- ALEXANDER, A. E.—See Powell, B. D.
- AMBERG, C. H. and MCINTOSH, R.—A study of adsorption hysteresis by means of length changes of a rod of porous glass, 1012.
- ARMSTRONG, R.—See Wiesner, K.
- ARNELL, J. C.—See McDermot, H. L.
- AZIZ, P. M. and WETMORE, F. E. W.—Molten salts. Electrical transport in the system silver nitrate – sodium nitrate, 779.
- BARCLAY, L. R. C.—See Thorn, G. D.
- BARRÉ, R.—See Perron, Y.
- BARTLETT, M. F.—See Wiesner, K.
- BARTLETT, M. F., FIGDOR, S. K., and WIESNER, K.—Synthesis of para-bridged benzene compounds. III, 291.
- BAUER, T. W. and DORLAND, R. M.—A note on the thermodynamic properties of the hydrates of sodium carbonate, 76.
- BERMAN, L., HALL, R. H., PYKE, R. G., and WRIGHT, G. F.—The methoxymercuration of 2-methyl-1-phenylpropene-1, 541.
- BERNSTEIN, H. J. and PULLIN, A. D. E.—Vibration spectra of *cis* and *trans* dichloroethylene-*d*₁, 963.
- BETTS, R. H. and MACKENZIE, A. N.—Radiochemical measurements of activity coefficients in mixed electrolytes, 146.
- BIGEISEN, J.—A theoretical evaluation of the nitrogen isotope effect in the thermal deamination of phthalamide, 443.
- BISHOP, C. T.—The action of liquid ammonia on wheat straw holocellulose, 229.
- BOIVIN, J. L.—See Gagnon, P. E.
- BOIVIN, P. A.—See Gagnon, P. E.
- BOIVIN, P. A., GAGNON, P. E., RENAUD, E., and BRIDGEO, W. A.—Cyanoacetic esters, amino acids, and pyrazolones, 994.
- BOLKER, H. I.—See Vavasour, G. R.
- BOURNS, A. N.—See Lindsay, J. G.; Stacey, F. W.
- BOURNS, A. N., EMBLETON, H. W., and HANSULD, M. K.—The reaction of tetrahydropyran with primary aromatic amines over activated alumina, 1.
- BOURNS, A. N. and TUDGE, A. P.—A new synthesis of piperidine, 71.
- BRECKENRIDGE, J. G.—See Stone, A. L.
- BRICE, C.—See Lemieux, R. U.
- BRIDGEO, W. A.—See Boivin, P. A.
- BROWN, A. T.—See Cragg, L. H.
- BROWN, F. and HOLLAND, D. A.—Isotope effects: Reaction at the carbonyl group, 438.
- BURKELL, J. E. and SPINKS, J. W. T.—Measurements of self-diffusion in aqueous solutions of sodium dihydrogen phosphate, 311.
- BYRNE, J., FLEMING, H., and WETMORE, F. E. W.—Molten salts. Electrical conductivity in the system silver nitrate – sodium nitrate, 922.
- BYWATER, S. and ROBERTS, R.—Temperature independent factors of hydrogen abstraction reactions in the gas phase, 773.
- CAMPBELL, A. N. and KARTZMARK, E. M.—The conductances of strong solutions of strong electrolytes at 95°, 128.
- CASTAGNE, A. E.—See Adams, G. A.
- CHISHOLM, A.—See Gagnon, P. E.
- COCKBURN, W. F. and MARION, L.—The papilionaceous alkaloids. XV. The structure and the partial synthesis of rhombifoline, 92.
- COLVIN, J. R.—The binding of anions by lysozyme, calf thymus histone sulphate, and protamine sulphate, 320. The size and shape of lysozyme, 831. Binding of anions by denatured proteins, 973.
- COLVIN, J. R., COOK, W. H., and ADAMS, G. A.—Electrophoretic homogeneity of polysaccharides in molar alkali, 603.
- COOK, W. H.—See Colvin, J. R.
- CÔTÉ, R.—See Gagnon, P. E.
- CRAGG, L. H.—See Manson, J. A.
- CRAGG, L. H. and BROWN, A. T.—The viscometric detection of branching in polymers. I. Branching in GR-S as a function of conversion, 1033.

- CRAIG, A. and MCINTOSH, R.—The preparation of sodium chloride of large specific surface, 448.
- CRAIG, H. M.—See Gagnon, P. E.
- CRAWFORD, V. A.—A theoretical study of 2,3-dinaphthylene, 47.
- DARWENT, B. DEB.—See Meadows, G. W.
- DELONG, W. A.—See Fiskell, J. G. A.
- DORLAND, R. M.—See Bauer, T. W.
- DOWNING, D. C.—2,2,5,5-Tetramethylolcyclopentanol pentanitrate, 124. The nitrosation of hexamine, 165.
- DRAIN, L. E.—See Morrison, J. A.
- DUGDALE, J. S.—See Morrison, J. A.
- EASTHAM, A. M. and LATREMOUILLE, G. A.—The chemistry of ethylene oxide. V. The reaction of ethylene oxide with halide ions in neutral and acid solution, 169.
- EDWARDS, O. E. and MARION, L.—Lycotoxine and its oxidation products, 627.
- EISENHAEUER, H. R., PEPPER, J. M., JAQUES, L. B., and SPINKS, J. W. T.—Dicumarol-2-C¹⁴: Synthesis and metabolism studies, 245.
- EMBLETON, H. W.—See Bourns, A. N.
- ENGLISH, W. D., TAURINS, A., and NICHOLLS, R. V. V.—Disilyl alkanes, 646.
- EPSTEIN, S. and WINKLER, C. A.—Studies of RDX and related compounds. VII. Relation between RDX and HMX production in the Bachmann reaction, 734.
- FAIRER, P., MYERS, J. L., and KEIRSTEAD, K. F.—The reduction of some chlorinated azobenzenes with titanous sulphate, 498.
- FARMILO, C. G.—See Levi, L.
- FIGDOR, S. K.—See Bartlett, M. F.; Wiesner, K.
- FISKELL, J. G. A., DELONG, W. A., and OLIVER, W. F.—Investigation of the forms of phosphorus in neutron-bombarded phosphates. Nature of the phosphorus-32, 9. Investigation of the forms of phosphorus in neutron-bombarded phosphates. III. Superphosphate and calcium sulphate hemihydrate, 185.
- FLEMING, H.—See Byrnie, J.
- FLEMING, W.—See Macnamara, J.
- FLOOD, E. A., TOMLINSON, R. H., and LEGER, A. E.—The flow of fluids through activated carbon rods. I, 348. II. The pore structure of activated carbon, 372. III. The flow of adsorbed fluids, 389.
- FUNT, B. L.—Dielectric dispersion in solid polyvinyl butyral, 84.
- FUNT, B. L. and SUTHERLAND, T. H.—Dielectric properties of polyvinyl acetals, 940.
- GAGNON, P. E.—See Boivin, P. A.
- GAGNON, P. E., BOIVIN, J. L., BOIVIN, P. A., and CRAIG, H. M.—Study of 4-mono- and 4,4-disubstituted-3-imino-2-benzoyl-5-pyrazolones, 52.
- GAGNON, P. E., BOIVIN, J. L., and CHISHOLM, A.—Synthesis of pyrazolones from α -keto and α -cyano esters, 904.
- GAGNON, P. E., NADEAU, G., and CÔTÉ, R.—Synthesis of α -amino acids from ethyl cyanoacetate, 592.
- GEORGIEFF, K. K.—Preparation of ketene from glacial acetic acid, methyl acetate, and ethyl acetate, 332.
- GIGUÈRE, P. A. and LIU, I. D.—Infrared spectrum, molecular structure, and thermodynamic functions of hydroxylamine, 948.
- GIGUÈRE, P. A. and WEINGARTSHOFER OLMOS, A.—A spectroscopic study of hydrogen bonding in performic and peracetic acids, 821.
- GILLESPIE, T. and LANGSTROTH, G. O.—Coagulation and deposition in still aerosols of various solids, 1003. An instrument for determining the electric charge distribution in aerosols, 1056.
- GILPIN, V. and WINKLER, C. A.—Studies of RDX and related compounds. VIII. Thermochemistry of RDX reactions, 743.
- GRAHAM, R. P., HITCHEN, A., and MAXWELL, J. A.—The polarographic determination of titanium in steels and nickel-base alloys, 661.
- GRAHAM, R. P., VANDALEN, E., and UPTON, A. M. C.—Note on the polarographic determination of zirconium, 1069.
- HABGOOD, H. W.—See Weinberger, M. A.
- HAINES, R. L.—See Hodgins, J. W.
- HALL, R. H.—See Berman, L.
- HANSULD, M. K.—See Bourns, A. N.
- HARDWICK, T. J.—The oxidation of ferrous sulphate solutions by γ -rays—The absolute yield, 17. The reduction of ceric sulphate solutions by ionizing radiation, 23. Radiation chemistry investigation of aqueous solutions using P³² and S³⁵ as internal sources, 39.
- HATTON, W. G.—See McKay, A. F.
- HENDERSON, D. R.—See Wiesner, K.
- HERBST, J. H. E.—The preparation of chlorite holocellulose, 668.
- HITCHEN, A.—See Graham, R. P.

- HODGINS, J. W. and HAINES, R. L.—The formation of trifluoromethyl radicals in the gas phase, 473.
- HOLLAND, D. A.—See Brown, E.
- HYDE, J. C.—See Sheffer, H.
- INGRAHAM, T. R.—Note on the preparation of hydrazine by arc electrolysis in liquid ammonia, 168.
- INGRAHAM, T. R. and PIDGEON, L. M.—The reactions of titanium tetraiodide on heated titanium and tungsten surfaces, 694.
- INGRAHAM, T. R. and WINKLER, C. A.—Studies on the formation of hexamine, 687.
- JAQUES, L. B.—See Eisenhauer, H. R.; Phillips, R. V.
- JONES, R. N.—See Nolin, B.
- KARTZMARK, E. M.—See Campbell, A. N.
- KEIRSTEAD, K. F.—See Fainer, P.
- KIRKWOOD, S.—See Leete, E.
- KNOP, O. and MACLEAN, D. B.—*Lycopodium* alkaloids. I. Physical properties and X-ray crystallographic data of some *Lycopodium* alkaloids, 598.
- KULKA, M. and MANSKE, R. H. F.—The synthesis of pyridocarbazoles, 711. The nitration of some quinoline derivatives, 720.
- LANGSTROTH, G. O.—See Gillespie, T.
- LATREMOUILLE, G. A.—See Eastham, A. M.
- LEETE, E., KIRKWOOD, S., and MARION, L.—The biogenesis of alkaloids. VI. The formation of hordenine and N-methyltyramine from tyramine in barley, 749.
- LEETE, E. and MARION, L.—The papilionaceous alkaloids. XVII. The synthesis of structural isomers of sparteine, 563.
- LEGER, A. E.—See Flood, E. A.
- LEITCH, L. C. and MORSE, A. T.—Synthesis of organic deuterium compounds. III. 1,2-Dibromoethane- d_4 and its derivatives, 924.
- LEITCH, L. C. and RENAUD, R.—Synthesis of organic deuterium compounds. II. Propyne-3- d_3 and propyne- d_4 , 79.
- LEMIEUX, R. U.—See Neish, A. C.
- LEMIEUX, R. U. and BRICE, C.—The mechanisms of glucose pentaacetate anomerization and levoglucosan formation, 295.
- LEVI, L. and FARMILO, C. G.—The characterization of narcotics as reineckates, 783. The quantitative determination of narcotics by ion exchange, 793.
- LINDSAY, J. G.—See Stacey, F. W.
- LINDSAY, J. G., BOURNS, A. N., and THODE, H. G.—Influence of temperature on the intermolecular C^{13} isotope effect in the decarboxylation of normal malonic acid, 163.
- LISTER, M. W.—The decomposition of hypochlorous acid, 879.
- LIU, I. D.—See Giguère, P. A.
- LOUNSBURY, M.—See Stevens, W. H.
- LUCIEN, H. W. and TAURINS, A.—The synthesis of dibenz [*a,c*] [1,3] cycloheptadiene-5,7-dione, 208.
- LUNER, P. and WINKLER, C. A.—Solvent effects in *cis-trans* isomerization, 679.
- MCCONNELL, W. B.—The estimation of free amino acids using a microdiffusion technique, 522.
- MCDERMOT, H. L. and ARNELL, J. C.—Charcoal sorption studies. I. The pore distribution in activated charcoals, 177.
- MACDONALD, D. M.—See Wiesner, K.
- MCGILVER, J. D. and WINKLER, C. A.—The mercury photosensitized reactions of nitric oxide, 194.
- MCINTOSH, R.—See Amberg, C. H.; Craig, A.
- McKAY, A. F.—See Vavasour, G. R.
- McKAY, A. F. and HATTON, W. G.—Urea derivatives, 225.
- MACKENZIE, A. N.—See Betts, R. H.
- MACLEAN, D. B.—See Knop, O.
- MACNAMARA, J., FLEMING, W., SZABO, A., and THODE, H. G.—The isotopic constitution of igneous sulphur and the primordial abundance of the terrestrial sulphur isotopes, 73.
- MAJURY, T. G. and STEACIE, E. W. R.—The reactions of CH_3 and CD_3 radicals with hydrogen and deuterium, 800.
- MANSKE, R. H. F.—See Kulka, M.
- MANSON, J. A. and CRAGG, L. H.—Normal and cross-linked polystyrene. I. Huggins' k' as a measure of nonlinearity, 482.
- MARION, L.—The papilionaceous alkaloids. XVI. Trilupine and dilupine, 386. See Cockburn, W. F.; Edwards, O. E.; Leete, E.
- MASON, S. G.—See Murray, F. E.
- MAXWELL, J. A.—See Graham, R. P.
- MEADOWS, G. W. and DARWENT, B. DEB.—The reactions of acetaldehyde with methanol, 501.
- MEEN, R. H.—See Picard, J. P.
- METRO, S. J. and TAURINS, A.—The reaction of pyridine and picolines with 2-bromo-2-nitro-1,3-indandione, 466.

- MOIR, R. Y.—See Smith, W. S.
- MORRISON, J. A., DRAIN, L. E., and DUGDALE, J. S.—Phase transitions in multimolecular layers of adsorbed nitrogen, 890.
- MORSE, A. T.—See Leitch, L. C.
- MORTIMER, D. C.—Paper chromatographic separation of some biologically important phosphate esters, 653.
- MURPHY, D.—Structure of a levan produced by *Bacillus polymyxa*, 872.
- MURRAY, D. H. and SPINKS, J. W. T.—Synthesis of P^{32} labeled parathion, 497.
- MURRAY, F. E. and MASON, S. G.—Coexistence phenomena in the critical region. I. The gravity effect in ethane from light scattering, 550.
- MYERS, J. L.—See Fainer, P.
- NADEAU, G.—See Gagnon, P. E.
- NEISH, A. C.—See Spyker, J. W.
- NEISH, A. C. and LEMIEUX, R. U.—The preparation of *p*-bromophenacyl esters and the characterization of *p*-bromophenacyl formate, 454.
- NICHOLLS, R. V. V.—See English, W. D.
- NOLIN, B. and JONES, R. N.—The preparation of some steroids containing deuterium, 727.
- OLIVER, W. F.—See Fiskell, J. G. A.
- ORR, R. J. and WILLIAMS, H. L.—The polymerization of isoprene and 2,3-dimethylbutadiene and copolymerization with styrene at -18°C . in emulsion, 108. Kinetics of the reactions between isopropyl cumene and tertiary butyl cumene hydroperoxides and iron (II) in dilute aqueous solutions in the absence of oxygen, 985.
- PEPPER, J. M.—See Eisenhauer, H. R.; Stevens, W. H.
- PERLIN, A. S.—Thermal decarboxylation of uronic acids, 278.
- PERRON, Y. and BARRÉ, R.—Synthesis of 1,1,1-trichloro-2,2-bis-(*p*-cyanophenyl)-ethane, 203.
- PERRY, E. J. and WINKLER, C. A.—The reaction between silver and triphenylmethyl chloride, 235.
- PHILLIPS, R. V., TREVOY, L. W., JAQUES, L. B., and SPINKS, J. W. T.—Synthesis of 2-methyl- C^{14} -1,4-naphthoquinone, 844.
- PICARD, J. P. and MEEN, R. H.—The preparation of polynitroethyleneamines, 102.
- PIDGEON, L. M.—See Ingraham, T. R.
- POWELL, B. D. and ALEXANDER, A. E.—The mobility of oil droplets, interfacial tension measurements, and gegen ion adsorption in soap solutions, 1044.
- PULLIN, A. D. E.—See Bernstein, H. J.
- PURVES, C. B.—See Segall, G. H.
- PYKE, R. G.—See Berman, L.
- RENAUD, E.—See Boivin, P. A.
- RENAUD, R.—See Leitch, L. C.
- RICE, H. M. and SOWDEN, F. J.—X-ray diffraction patterns of dinitrophenyl derivatives of amino compounds, 575.
- ROBERTS, R.—See Bywater, S.
- SCHNEIDER, W. G.—See Weinberger, M. A.
- SEGALL, G. H. and PURVES, C. B.—The action of hydroxylamine, its *o*-methyl ether, and their hydrochlorides on cellulose trinitrate in pyridine, 860.
- SHEFFER, H. and HYDE, J. C.—An important reflectance correction in light-scattering studies, 817.
- SMITH, W. S. and MOIR, R. Y.—1-Indoleacetic acid, 411.
- SOWDEN, F. J.—See Rice, H. M.
- SPINKS, J. W. T.—See Burkell, J. E.; Eisenhauer, H. R.; Murray, D. H.; Phillips, R. V.
- SPYKER, J. W. and NEISH, A. C.—A new synthesis of C^{14} labeled cyanide, 461.
- STACEY, F. W., LINDSAY, J. G., and BOURNS, A. N.—Isotope effects in the thermal deamination of phthalamide, 135.
- STEACIE, E. W. R.—See Majury, T. G.
- STEVENS, W. H., PEPPER, J. M., and LOUNSBURY, M.—The decarboxylation of anthranilic acid, 529.
- STONE, A. L. and BRECKENRIDGE, J. G.—Optical stability in bipyridyl compounds, 725.
- STONE, J. E. and TANNER, K. G.—Wheat straw native lignin, 166.
- SUTHERLAND, T. H.—See Funt, B. L.
- SWENSON, E. G. and THORVALDSON, T.—The quantitative determination of the free monoxides of calcium, strontium, and barium, and of calcium ethylate by the alcohol-glycerol method, 257.
- SZABO, A.—See Macnamara, J.
- TANNER, K. G.—See Stone, J. E.
- TAURINS, A.—See English, W. D.; Lucien, H. W.; Metro, S. J.
- THODE, H. G.—See Lindsay, J. G.; Macnamara, J.
- THORN, G. D.—6,8-Dimethoxy-4-chromanone, 224.
- THORN, G. D. and BARCLAY, L. R. C.—Some methyl ethers and acetates of purpurogallin, 251.
- THORVALDSON, T.—See Swenson, E. G.

- TOMLINSON, R. H.—See Flood, E. A.
TREVOY, L. W.—See Phillips, R. V.
TRICK, G. S. and WINKLER, C. A.—The reaction of active nitrogen with propylene, 915.
TROST, W. R.—Addition compounds of the group IV halides. I. Triethylamine and the tetrachlorides of silicon, germanium, tin, and titanium, 835. II. Ethylamine and the tetrachlorides of silicon, germanium, tin, and titanium, 842.
TUDGE, A. P.—See Bourns, A. N.
TURNER, R. C. and WINKLER, C. A.—Effect of addition agents on copper deposition in a convection-free system, 507.
UPTON, A. M. C.—See Graham, R. P.
VALENTA, Z.—See Wiesner, K.
VANDALEN, E.—See Graham, R. P.
VAVASOUR, G. R., BOLKER, H. I., and MCKAY, A. F.—Steroids. I. A case of Walden inversion with nucleophilic substitution at position 3 of Δ^5 -steroids, 933.
WEINBERGER, M. A., HABGOOD, H. W., and SCHNEIDER, W. G.—On the liquid-vapor coexistence curve of xenon in the region of the critical temperature. II, 815.
WEINBERGER, M. A. and SCHNEIDER, W. G.—On the liquid-vapor coexistence curve of xenon in the region of the critical temperature, 422. Density distributions in a vertical tube containing xenon near the critical temperature as measured by a radioactive tracer technique, 847.
WEINGARTSHOFER OLMOS, A.—See Giguère, P. A.
WELLINGTON, E. F.—An ultramicro method for quantitative determination of amino acids, 581.
WETMORE, F. E. W.—See Aziz, P. M.; Byrne, J.
WIESNER, K.—See Bartlett, M. F.
WIESNER, K., FIGDOR, S. K., BARTLETT, M. F. and HENDERSON, D. R.—*Garrya* alkaloids. I. The structure of garryine and veatchine, 608.
WIESNER, K., MACDONALD, D. M., VALENTA, Z., and ARMSTRONG, R.—*Pithecolobium*, the alkaloid of *Pithecolobium saman* Benth. I, 761.
WILLIAMS, H. L.—See Orr, R. J.
WINKLER, C. A.—See Epstein, S.; Gilpin, V.; Ingraham, T. R.; Luner, P.; McGilvery, J. D.; Perry, E. J.; Trick, G. S.; Turner, R. C.
WRIGHT, G. F.—Mechanism of guanidine nitration. I. Azo-bis-nitroformamidine, 62. Reaction of oxymmercials with hydrazine, 268. See Berman, L.

CORRECTION

Page 371. In line 3, Equation 11 should read Equation 13.